DECISION ANALYSIS

Decision Trees, Part 2

Tony Starfield

recorded: 2005

Notice the power of this sort of simulation model. It's not only something that you could use to convince yourself about whether or not it's safe. It really communicates to other people what might happen. Human beings are really bad at assessing risks. It's almost as though evolution has programmed into us an inability to do this properly. Maybe the reason is that if you had an ancestor who was being charged by a saber-toothed tiger who stopped to calculate the odds of running or standing, you probably wouldn't have been born.

So going to a spreadsheet gives people a feel for what happens, what might happen, which is completely different to the intuition, or likely to be different to the intuition. So here is an example of a simulation model which supplements the decision tree analysis to make sure that you are comfortable with your decision.

Hopefully you are convinced now that it is safe to go and bet at the blue booth. Well, I said this problem was going to be morally corrupting. So far we've only had gambling. We now are going to introduce bribery.

If we go back and look at our diagram, the person at the gate has noticed that everybody, or just about everybody, wants tickets for the blue booth. So he or she decides to go into business for himself or herself. And if you haven't yet been to bet there, you're going to find that when you go to the gate, the person at the gate says to you, "Here are some red tickets. Enjoy yourself." And you say, "Well, really I wanted blue tickets." And the person at the gate says, "Blue tickets? Well, I'm afraid you can't have them without paying for them - blue tickets cost X dollars." We don't know what X is yet. X dollars in effect is a bribe you have to pay to the gatekeeper to get blue tickets instead of red tickets. I want you to think about how much you would be prepared to pay. Again, suspend your moral judgment.

Well, let's imagine that you come back, or somebody comes back, and says, "I'm willing to pay $6,000 for blue tickets." Before you laugh at that person, you need to ask that person why. And suppose the explanation goes something like this. "I'm a spoiled brat. My father is a multi-billionaire and gives me as much money as I need. I really enjoy gambling. For me to

gamble for $10 or a dollar gives me no thrill whatsoever. To gamble for $100 gives me a bit more of a thrill. I know that if I go in and pay $6,000, I'm going to lose money, or I'm likely to lose money, but it's worth it. I consider that what I can afford to pay for entertainment value."

Well, notice you can't really argue with that. On the other hand, suppose somebody says they're willing to pay $6,000 and you say, “Why”, and the person says, "Well, I'm a very poor student. I don't know if I'm going to have enough money for breakfast tomorrow. Winning $10 doesn't really help me very much. I want to win $100 or more each time I bet. So I'm willing to pay for that." I think you can see that particular person has a problem.

So what we have here is a combination not just of an analysis of the problem, but a combination of analysis and a value system. You cannot decide whether what the person is prepared to pay is reasonable or not without first understanding what their value system is - what winning and losing means to them, and what risk means to them. And this is the difference between the problem previously when we didn't have a bribe, where it was purely a question of analysis, and this particular problem where you actually have to combine a value system with the analysis.

But what sort of analysis would we do? The decision tree analysis probably tells you that if you could win on average $4,000 at blue and $450 at red, that maybe you could afford to pay $3,500 and still come out ahead.

But to really understand the risk involved, we need to go back to that spreadsheet and put the bribe onto the spreadsheet. Let's do that.

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